LPDES PERMIT NO. LA0002933 (Agency Interest No. 3400)

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. Company/Facility Name: Basic Chemicals Company, L.L.C.
Basic Chemicals
P.O. Box 227
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II. Issuing Office: Louisiana Department of Environmental Quality (LDEQ)
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Water Permits Division
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Date Prepared: January 25, 2007

IV. Permit Action/Status:

A. Reason For Permit Action:

Proposed reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2365/40 CFR 122.46*.

* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, and 405-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX. Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

B. LPDES permit: Permit effective date: November 1, 2001
Permit expiration date: October 31, 2006
EPA has not retained enforcement authority.

C. LPDES application received on May 5, 2006. Permit application addendum received on December 29, 2006, March 7, 2007 and March 16, 2007.

V. Facility Information:

A. Location – 8318 Ashland Road, Geismar, Ascension Parish

B. Applicant Activity -

According to the application, Basic Chemicals Company is an organic and inorganic chemicals manufacturing facility that produces chlorine, caustic soda, hydrogen, pentachloropropane (5 CP), ethylene dichloride (EDC), chloroform, methyl chloride, methylene chloride, Perchloroethylene (Perc), and carbontetrachloride.

The facility proposes to reroute a portion of the process wastewater from the EDC Units to an internal outfall (Outfall 101) which will be routed to the neighboring BASF facility. This wastewater will be treated to remove metals prior to being sent to BASF. At BASF, the wastewater will undergo biological treatment and subsequent discharge to the Mississippi River via BASF's Final Outfall 001 (LPDES permit LA0002950).

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401-402, and 404-471 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Organic Chemicals, Plastics, and Synthetic Fibers	40 CFR 414
Process flow – 0.583 MGD	

Inorganic Chemicals -
Chlor Alkali 40 CFR 415.63
Daily Production – 2820 k lbs/day
Process flow – 1.67 MGD

Other sources of technology based limits:

- LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).
- Best Professional Judgement

D. Fee Rate -
1. Fee Rating Facility Type: Major
2. Complexity Type: VI
3. Wastewater Type: II
4. SIC code: 2812, 2819, 2869 and 2813

E. Continuous Facility Effluent Flow – 2.841 MGD

VI. Receiving Waters: Mississippi River (Outfall 001)
Blind River via Smith Bayou (Outfall 002)

Mississippi River (Outfall 001) –

A. TSS (15%), mg/L: 32.0 mg/l*
B. Average Hardness, mg/L $CaCO_3$: 153.4 mg/l*
C. Critical Flow, cfs: 141,955 *
D. Mixing Zone Fraction: 1/3 *
E. Harmonic Mean Flow, cfs: 366,748*
F. River Basin: Mississippi River, Segment No.: 070301
G. Designated Uses: primary contact recreation, secondary contact recreation, fish and wildlife propagation, drinking water supply

* Stream data based upon the following: Water Quality Management Plan, Volume 5A, 1994; LAC 33:IX Chapter 11, and from recommendations from the Engineering Section. Hardness and 15% TSS data come from the monitoring station 58010319, located on the Mississippi River.

Blind River via Smith Bayou (Outfall 002) –

A. River Basin: Lake Pontchartrain, Segment 040401
B. Designated Uses: primary contact recreation, secondary contact recreation, fish and wildlife propagation, outstanding natural resource water

VII. Outfall Information:

Outfall 001

A. Type of wastewater – Treated process wastewaters, process area stormwater, utility wastewater consisting of cogeneration wastewaters, boiler blowdown, north and south plant cooling tower blowdown, deionization and ion exchange regeneration, and sanitary wastewater, and miscellaneous industrial utility wastewaters

B. Location – At the point of discharge from the final effluent processing (FEP) System prior to combining with the waters of the Mississippi River (Latitude 30°10'19", Longitude 91°00'10"), 183 M.A.H.P.

C. Treatment – air stripping and pH adjustment/decarbonation

D. Flow – Continuous: 2.841 MGD

E. Receiving waters – Mississippi River

F. Basin and segment – Mississippi River Basin, Segment 070301

G. Estimated effluent data – See Appendix C

Outfall 002

A. Type of wastewater – Non-process area stormwater runoff from the Chloralkali Units; MCF II area stormwater; excess capacity process area stormwater runoff from the Chlorinated Organics Units, Railyard Drain sump II, and Chloralkali units; and misc. wastewaters including but not limited to steam trap blowdown, clarified water, fire water, instrument air and compressor blowdown, and potable water (eye wash stations, safety showers)

B. Location – At the point of discharge from the stormwater drainage system Gate #7 (located downstream of the stormwater surge pond and the surge pond bypass valve) prior to combining with other waters (Latitude 30°10'52", Longitude 90°58'25").

C. Treatment – Settling

D. Flow – Intermittent, 1.357 MGD

E. Receiving waters – Smith Bayou thence to Blind River

F. Basin and segment – Lake Pontchartrain Basin, Segment 040401

G. Estimated effluent data – See Appendix C

Outfall 101

A. Type of wastewater – Process wastewaters from the EDC Units (This wastewater will be routed to a neighboring facility [BASF – LA0002950] for further treatment in BASF's biological treatment system and subsequent discharge to the Mississippi River)

B. Location – At the point of discharge from the EDC Unit wastewater treatment system prior to combining with other waters

C. Treatment – precipitation and filtration

D. Flow – Intermittent, 0.144 MGD (Max)

E. Receiving waters – discharge to BASF thence to the Mississippi River (via BASF's Final Outfall 001)

F. Basin and segment – Mississippi River Basin, Segment 070301

G. Estimated effluent data – No effluent data, proposed outfall

VIII. Proposed Permit Limits and Rationale:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. CHANGES FROM PREVIOUS PERMIT

1. Outfall 101 - This outfall has been added to the permit. Basic proposes to direct part of the flow from the EDC Units to a neighboring facility (BASF) for biological treatment. Metals in the wastestream will be treated prior to routing the wastewater to BASF.

2. Outfall 001 - The effluent limitations for all parameters (with the exception of Total Residual Chlorine, Fecal Coliform and Hexachlorobenzene) decreased based upon current flow and production information.

3. Outfall 001 - Monitoring frequency reductions were made for several parameters. (See Section C below)

B. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where

applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for the limitations established in the permit.

Basic Chemicals Company, L.L.C. is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Manufacturing Operation	Guideline
- Organic chemical manufacturing	40 CFR 414, Subparts F, G, H and J
- Inorganic chemical manufacturing	40 CFR 415.62 and 415.63 (Subpart F)

Proposed effluent limitations and basis of permit limitations are found below:

Outfall 001 - Treated process wastewaters, process area stormwater, utility wastewater consisting of cogeneration wastewaters, boiler blowdown, north and south plant cooling tower blowdown, deionization and ion exchange regeneration, and sanitary wastewater, and miscellaneous industrial utility wastewaters

EFFLUENT LIMITATIONS:

Paramater	Monthly Avg. (lbs/day)	Daily Max. (lbs/day)	Frequency	Sample Type
Flow-MGD	Report	Report	Continuous	Recorder
pH Range Excursions (Continuous Monitoring), Number of Events >60 Minutes	---	0*	Continuous	Recorder
pH Range Excursions (Continuous Monitoring), Monthly Total Accumulated Time in Minutes	---	446*	Continuous	Recorder
pH Minimum/Maximum Values (Standard Units)	Report (Min)	Report (Max)	Continuous	Recorder
BOD_5	653	1738	1/week	24-hr. Composite
TSS	1907	4610	3/week	24-hr. Composite
Total Residual Chlorine	22.3	36.7	1/month	Grab
Fecal Coliform Colonies/100 ml	200	400	1/quarter	Grab
METALS AND CYANIDE				
Total Copper	17.3	42.0	1/month	24-hr. Composite
Total Lead	6.8	16.6	1/year	24-hr. Composite
Total Nickel	13.0	33.3	1/month	24-hr. Composite
Total Zinc	9.3	23.0	1/week	24-hr. Composite

VOLATILE COMPOUNDS				
Acrylonitrile	0.46	1.13	1/year	24-hr. Composite
Benzene	0.28	0.65	1/year	24-hr. Composite
Carbon Tetrachloride	0.69	1.85	1/week	24-hr. Composite
Chlorobenzene	0.69	1.85	1/year	24-hr. Composite
Chloroethane	0.53	1.43	1/week	24-hr. Composite
Chloroform	0.54	1.58	3/week	24-hr. Composite
1,1-Dichloroethane	0.11	0.29	1/quarter	24-hr. Composite
1,2-Dichloroethane	0.88	2.79	3/week	24-hr. Composite
1,1-Dichloroethylene	0.11	0.29	1/quarter	24-hr. Composite
1,2-trans-Dichloroethylene	0.12	0.32	1/quarter	24-hr. Composite
1,2-Dichloropropane	0.95	3.86	1/year	24-hr. Composite
1,3-Dichloropropylene	0.95	3.86	1/year	24-hr. Composite
Ethylbenzene	0.69	1.85	1/year	24-hr. Composite
Methyl Chloride	0.53	1.43	1/quarter	24-hr. Composite
Methylene Chloride	0.18	0.83	1/week	24-hr. Composite
Tetrachloroethylene	0.25	0.80	1/week	24-hr. Composite
Toluene	0.14	0.36	1/year	24-hr. Composite
1,1,1-Trichloroethane	0.11	0.29	1/quarter	24-hr. Composite
1,1,2-Trichloroethane	0.16	0.62	3/week	24-hr. Composite
Trichloroethylene	0.13	0.34	1/week	24-hr. Composite
Vinyl Chloride	0.47	0.84	1/week	24-hr. Composite
ACID COMPOUNDS				
2,4-Dimethylphenol	0.09	0.23	1/year	24-hr. Composite
4,6-Dinitro-o-Cresol	0.38	1.35	1/year	24-hr. Composite
2,4-Dinitrophenol	5.87	20.86	1/year	24-hr. Composite
2-Nitrophenol	0.32	1.12	1/year	24-hr. Composite
4-Nitrophenol	0.79	2.80	1/year	24-hr. Composite
Phenol	0.09	0.23	1/year	24-hr. Composite
BASE NEUTRAL COMPOUNDS				
Acenaphthene	0.09	0.23	1/year	24-hr. Composite
Acenaphthylene	0.09	0.23	1/year	24-hr. Composite
Anthracene	0.09	0.23	1/year	24-hr. Composite
Benzo(a)anthracene	0.09	0.23	1/year	24-hr. Composite
Benzo(a)pyrene	0.10	0.23	1/year	24-hr. Composite
3,4-Benzofluoranthene	0.10	0.23	1/year	24-hr. Composite
Benzo(k)fluoranthene	0.09	0.23	1/year	24-hr. Composite
Bis(2-ethylhexyl) Phthalate	0.46	1.25	1/year	24-hr. Composite
Chrysene	0.09	0.23	1/year	24-hr. Composite
1,2-Dichlorobenzene	0.95	3.86	1/year	24-hr. Composite
1,3-Dichlorobenzene	0.69	1.85	1/year	24-hr. Composite
1,4-Dichlorobenzene	0.69	1.85	1/year	24-hr. Composite
Diethyl phthalate	0.22	0.55	1/year	24-hr. Composite
Dimethyl phthalate	0.09	0.23	1/year	24-hr. Composite
Di-n-butyl phthalate	0.10	0.21	1/year	24-hr. Composite
Fluoranthene	0.11	0.26	1/year	24-hr. Composite
Fluorene	0.09	0.23	1/year	24-hr. Composite
Hexachlorobenzene	0.49	1.18	1/week	24-hr. Composite
Hexachlorobutadiene	0.69	1.85	1/month	24-hr. Composite
Hexachloroethane	0.95	3.86	1/month	24-hr. Composite
Naphthalene	0.09	0.23	1/year	24-hr. Composite
Nitrobenzene	10.88	31.13	1/year	24-hr. Composite

Phenanthrene	0.09	0.23	1/year	24-hr. Composite
Pyrene	0.10	0.23	1/year	24-hr. Composite
1,2,4-Trichlorobenzene	0.95	3.86	1/year	24-hr. Composite
WHOLE EFFLUENT TOXICITY TESTING				
48-hr. Acute**	---	---	1/year	24 hr. Composite

* The pH shall be within the range of 6.0 – 9.0 standard units at all times subject to continuous monitoring pH range excursion provisions. Where a permittee continuously measures the pH of wastewater as a requirement or option in an LPDES permit, the permittee shall maintain the pH of such wastewater within the range set forth in the permit, except that excursions from the range are permitted, provided:

1. The total time during which the pH values are outside the required range of pH values shall not exceed 446 minutes in any calendar month; and
2. No individual excursion from the range of pH values shall exceed 60 minutes.

** See Section E below

EFFLUENT LIMITATIONS BASIS: The requirement to report flow is based upon LAC 33:IX.2707.I.1.b. All other requirements, with the exception of Fecal Coliform and Hexachlorobenzene are based upon a combination of 40 CFR 414, Subparts F, G, H and J and 40 CFR 415.62 and 415.63 (Subpart F). See Appendix A for detail on calculation of the effluent limitations. Fecal Coliform limitations were based on the previous permit and LPDES sanitary wastewater general permits. Hexachlorobenzene limitations are based upon water quality.

Upon issuance of a final permit, Basic Chemicals plans to reroute a portion of its EDC Unit wastewater to BASF for biological treatment and subsequent discharge to the Mississippi River via BASF's LPDES permit (LA0002950). This wastewater is a large contributor to Basic Chemical's metal bearing stream. As per an agreement with BASF, Basic Chemicals will treat the wastewater to remove as much of the metals loading as possible prior to routing the wastewater to BASF. However, the wastestream from the metals treatment which contains the precipitated metals will still be discharged to the Mississippi River via Basic Chemicals' Outfall 001.

When calculating the metals limitations for Outfall 001, it was determined that limitations calculated using the metal bearing flows from the previous 2001 permit were more limiting than those calculated using the higher flows from the 2006 renewal application. Therefore, in accordance with LAC 33:IX.2707.L (antibacksliding), the more stringent limitations were established in the permit. Further, the metals effluent data at Outfall 001 for Total Copper, Total Lead, Total Nickel, and Total Zinc shall be reported as a sum of the loadings calculated at Outfall

001 and the respective loadings calculated at Outfall 101. The sum of these two loadings shall not exceed the effluent limitations established at Outfall 001.

Outfall 002 - Non-process area stormwater runoff from the Chloralkali Units; MCF II area stormwater; excess capacity process area stormwater runoff from the Chlorinated Organics Units, Railyard Drain sump II, and Chloralkali units; and misc. wastewaters including steam trap blowdown, clarified water, fire water, instrument air and compressor blowdown, and potable water (eye wash stations, safety showers)

EFFLUENT LIMITATIONS:

Paramater	Monthly Avg. (mg/l)	Daily Max. (mg/l)	Frequency	Sample Type
Flow-MGD	Report	Report	1/week	Estimate
TOC	---	35	1/week	Grab
pH Min/Max Values (Standard Units)	6.0 (Min)	9.0 (Max)	1/week	Grab
Carbon Tetrachloride	---	0.380	1/week	Grab
Chloroethane	---	0.295	1/week	Grab
Chloroform	---	0.325	1/week	Grab
1,1-Dichloroethane	---	0.059	1/week	Grab
1,2-Dichloroethane	---	0.574	1/week	Grab
1,1-Dichloroethylene	---	0.060	1/week	Grab
Methyl Chloride	---	0.295	1/week	Grab
Methylene Chloride	---	0.170	1/week	Grab
Tetrachloroethylene	---	0.164	1/week	Grab
1,1,1-Trichloroethane	---	0.059	1/week	Grab
1,1,2-Trichloroethane	---	0.127	1/week	Grab
Trichloroethylene	---	0.069	1/week	Grab
Vinyl Chloride	---	0.172	1/week	Grab
Total Copper	---	3.380	1/week	Grab
Total Nickel	---	3.980	1/week	Grab
Total Zinc	---	2.610	1/week	Grab

EFFLUENT LIMITATIONS BASIS: The requirement to report flow is based upon LAC 33:IX.2707.I.1.b. The TOC Daily Max limit is based upon the previous permit. All other limitations are based upon the previous permit and LDEQ's stormwater guidance [letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)], which indicates that if a potential exists for a toxic parameter to be discharged through a stormwater outfall, then that toxic parameter shall receive a BPJ limitation based on the OCPSF guidelines (40 CFR 414), Subpart J.

Outfall 101 - Process wastewaters from the EDC Units

EFFLUENT LIMITATIONS:

Paramater	Monthly Avg. (lbs/day)	Daily Max (lbs/day)	Monthly Avg (mg/l)	Daily Max. (mg/l)	Frequency	Sample Type
Flow-MGD	Report	Report	---	---	1/week	Estimate
Total Chromium	Report	Report	1.110	2.770	1/week	Grab
Total Copper	Report	Report	1.450	3.380	1/week	Grab
Total Lead	Report	Report	0.320	0.690	1/week	Grab
Total Nickel	Report	Report	1.690	3.980	1/week	Grab
Total Zinc	Report	Report	1.050	2.610	1/week	Grab

EFFLUENT LIMITATIONS BASIS: The requirement to report flow is based upon LAC 33:IX.2707.l.1.b. The limitations for all other parameters are based upon 40 CFR 414, Subpart J. Additionally, the permittee is required to report the calculated mass loading for each parameter. The mass loadings from Outfall 101 will be added to the loadings for the respective metals at Outfall 001. The combined loadings shall not exceed the mass limitations established at Outfall 001. If there is an exceedance of the total mass loading, it shall be reported at Outfall 001. Please note that there are no Total Chromium limitations at Outfall 001, therefore, the calculated mass loading for Total Chromium will only be reported at Outfall 101.

C. MONITORING FREQUENCIES

As requested by the permittee, several monitoring frequencies have been reduced based upon the April, 1996, Interim Guidance for Performance-Based Reduction of NPDES Permit Monitoring Frequencies. This guidance was prepared in response to the President's Regulatory Reinvention Initiative to reduce the reporting and monitoring burden on the regulated community. These monitoring frequency reductions have been established in the draft permit because the permittee has demonstrated an ability to consistently reduce pollutants in the discharge below the levels necessary to meet existing permit requirements for the respective outfalls. Two years of data was reviewed and the composite average of this data was compared to the permit limit to determine the potential monitoring frequency reduction.

Some reductions that were made established monitoring that was more frequent than the reductions allowed by the performance-based guidance mentioned above. However, as indicated in the guidance, this Office may elect to maintain higher monitoring frequency levels where there may be a particular interest in human health, endangered species, or sensitive aquatic environment. This Office reserves the right to impose more stringent requirements than those outlined in the performance-based guidance.

Monitoring reductions for Chloroform, 1,2-Dichloroethane, 1,1,2-Trichloroethane, TSS and Total Zinc were not granted because DMR data revealed excursions for these parameters within the last three (3) years. Additionally, no reductions were granted for either BOD or Hexachlorobenzene. This Office considers BOD an important indicator parameter which requires at least 1/week monitoring. With regard to Hexachlorobenze, the minimum monitoring frequency for a water quality based parameter that has the potential for being present on site is 1/week in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001.

Below is a summary of the reductions that were made and their basis:

Parameter	Reduced Freq.	Basis
Carbon Tetrachloride	1/week	Performance-based reduction guidance*
Chloroethane	1/week	Performance-based reduction guidance*
Methylene Chloride	1/week	Performance-based reduction guidance*
Tetrachloroethylene	1/week	Performance-based reduction guidance*
Trichloroethylene	1/week	Performance-based reduction guidance*
Vinyl Chloride	1/week	Performance-based reduction guidance*
1,1-Dichloroethane	1/quarter	Performance-based reduction guidance*
Total Copper	1/month	BPJ
Total Nickel	1/month	BPJ
Total Residual Chlorine	1/month	BPJ
Hexachlorobutadiene	1/month	BPJ
Hexachloroethane	1/month	BPJ
Methyl Chloride	1/quarter	Performance-based reduction guidance*
1,1-Dichloroethylene	1/quarter	Performance-based reduction guidance*
1,2-trans-Dichloroethylene	1/quarter	Performance-based reduction guidance*
1,1,1-Trichloroethane	1/quarter	Performance-based reduction guidance*

* April, 1996, Interim Guidance for Performance-Based Reduction of NPDES Permit Monitoring Frequencies

Whole Effluent Toxicity testing frequency is based upon recommendations from the Municipal and General Water Permits Section (see Appendix D).

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limitations by

following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001.

In accordance with 40 CFR 122.44(d)(I)/LAC 33:IX.2707.D.1., the existing discharge was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limitations:

Hexachlorobenzene

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

To further ensure compliance with 40 CFR 122.44(d)(I), whole effluent toxicity testing has been established for Outfall 001 (See Section E below).

E. BIOMONITORING REQUIREMENTS

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall 001 are as follows:

TOXICITY TESTS	FREQUENCY
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 48-Hour Acute, Pimephales promelas	1/year

NOEC, Value [%], Lethality, Static Renewal, 48-Hour Acute, Pimephales promelas	1/year
NOEC, Value [%] Coefficient of Variation, Static Renewal 48-Hour Acute, Pimephales promelas	1/year
NOEC, Pass/Fail [0/1], Lethality, Static Renewal 48-Hour Acute, Daphnia pulex	1/year
NOEC, Value [%], Lethality, Static Renewal 48-Hour Acute Daphnia pulex	1/year
NOEC, Value [%] Coefficient of Variation, Static Renewal 48-Hour Acute, Daphnia pulex	1/year

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to this Office. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. The additional effluent concentrations shall be 0.04%, 0.05%, 0.07%, 0.1%, and 0.13% effluent. The biomonitoring critical dilution is defined as 0.1% effluent.

IX. Compliance History/DMR Review:

A. Compliance History – The facility was issued a Penalty Assessment on November 23, 2004 (when the site was operated by Vulcan Materials Company). Issues from this Order have been resolved and the Order is closed.

B. DMR Review (Jan. 2004 – January 2007)

Parameter	Outfall	Date	Limitation (lbs/day)	Sample Result (lbs/day)
TSS	001	3/2004	1967 : 4801	1445 : 12226
TSS	001	5/2004	1967 : 4801	1081 : 6090
TSS	001	12/2004	1967 : 4801	2922 : 31106
Chloroform	001	5/2005	0.69 : 2.01	0.56 : 6.37
Total Zinc	001	10/2005	10.0 : 24.9	6.66 : 28.33
1,1,2-trichloro-Ethane	001	10/2005	0.2 : 0.79	0.12 : 1.72
1,2-dichloro-Ethane	001	10/2005	1.12 : 3.56	0.73 : 10.29
Chloroform	001	8/2006	0.69 :2.01	0.26 : 2.08
Chloroform	001	1/3/2007	0.69 : 2.01	3.27 (Max)

IX. Endangered Species:

The receiving waterbodies for Basic Chemicals are Subsegment 070301 of the Mississippi River Basin and Segment 040401 of the Lake Pontchartrain Basin. Segment 040401 is not listed in

Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). However, Segment 070301 of the Mississippi River Basin has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which is listed as a threatened or endangered species. This draft permit has been submitted to the FWS for review in accordance with a letter dated September 29, 2006 from Watson (FWS) to Brown (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, and after consultation with FWS, LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. Effluent limitations are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The more stringent of technology and water quality based limits (as applicable) have been applied to ensure maximum protection of the receiving water.

X. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XI. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

XII. Variances:

No requests for variances have been received by this Office.

XIII. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

A public notice will be published in a local newspaper of general circulation and in the Office of Environmental Services Public Notice Mailing List.

XIV. Stormwater Pollution Prevention Plan (SWP3) Requirements:

In accordance with LAC 33:IX.2707.I.3 and 4[40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all stormwater discharges from the facility, either through permitted outfalls, through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires implementation of a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, that plan could be incorporated by reference into the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of storm water associated with industrial activity, as defined at LAC 33:IX.2511.B.14 [40 CFR 122.26(b)(14)].

XV. TMDL Waterbodies:

Basic Chemicals discharges process wastewaters, utility wastewaters and stormwater to the Mississippi River (Segment 070301). Segment 070301 is not listed on LDEQ's Final 2004 303(d) List, as impaired, and to date no TMDLs have been established. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by any future TMDLs.

The facility also discharges stormwater runoff and miscellaneous utility wastewaters to Segment 040401. This segment is listed on LDEQ's Final 2004 303(d) List as impaired for phosphorus, nutrients (nitrate + nitrite as N), organic enrichment/low DO, turbidity, sedimentation/siltation, and mercury.

Phosphorus, nutrients, organic enrichment/low DO:

Basic Chemical's discharge to Segment 040401 (from Outfall 002) consists of stormwater runoff and miscellaneous utility wastewaters. Based upon effluent data submitted in the LPDES application, this Office has determined that the discharge from Outfall 002 has no reasonable potential to contribute to further impairment of the receiving waterbody. Therefore, no additional monitoring requirements have been established in the permit.

Turbidity, sedimentation/siltation:

Because the discharge to Segment 040401 (from Outfall 002) consists of stormwater runoff, it is reasonable to expect some level of suspended solids in the effluent. However, based upon effluent data submitted by the facility, this Office does not find the concentration of suspended solids significant enough to require effluent limitations. The LPDES permit requires the facility to maintain a stormwater pollution prevention plan which will aid in the reduction of suspended solids found in the effluent.

Mercury:

A Mercury TMDL for Segment 040401 will be scheduled for development following completion of TMDLs under the EPA Consent Decree TMDL schedule. All currently effective Louisiana Mercury TMDLS state that while there are many potential sources of mercury to waters of the state of Louisiana, over 99% of the pollutant load comes from the atmospheric deposition of mercury from global and local sources. Current Louisiana Mercury TMDLs do not indicate mercury is discharged from the operation of organic or inorganic chemical facilities, and it is not reasonably expected that stormwater discharges from this facility would further cause or contribute to the impairment of this waterbody. Therefore, no additional requirements were placed in this proposed permit.

A reopener clause will be included in the permit to allow for the establishment of more stringent effluent limitations and requirements as imposed by any future or modified TMDLs. The LDEQ reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future in order to maintain the water quality integrity and the designated uses of the receiving waterbody based upon additional TMDLs and/or water quality studies. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.